

Dr. Roshan Dharshana Yapa

B.Sc.(Statistics) (Hons), M.Sc. (Comp. Sci) (UCSC), D.Eng (Info. Eng.) (Hiroshima, Japan), MIASSL

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PERSONAL INFORMATION

Full Name : Yapa Pathirannahalage Roshan Dharshana Yapa
Date of Birth : 29th December, 1975
Nationality : Sri Lankan
Passport Number : N5267168
Current Address : 8/1A/1/1, Springdale, Pitakanda Road, Aniwatta,
Kandy 20000, Sri Lanka.



EDUCATIONAL QUALIFICATIONS

- **DOCTOR OF ENGINEERING IN INFORMATION ENGINEERING (2008): GRADUATE SCHOOL OF ENGINEERING, HIROSHIMA UNIVERSITY, JAPAN.**
Thesis Title: A Mammographic Image Processing and Stellate Lesion Detection Method.
Academic Advisor: Prof. Harada Koichi
- **MASTER OF SCIENCE IN COMPUTER SCIENCE (2005): UNIVERSITY OF COLOMBO, SCHOOL OF COMPUTING (UCSC).**
Thesis Title: Automation of Multiple Linear Regression Analysis Using Neural Networks
Academic Advisor: Dr. D.A.S. Atukorale
- **BACHELOR OF SCIENCE (STATISTICS SPECIAL) (2001): UNIVERSITY OF SRI JAYEWADENEPURA**
Class: Second Class Upper Division Honours.
Subjects Offered in the First Year: Statistics, Mathematics & Physics.
Final Year Research Project: A Simulation Program to Study Traffic Flow at a Roundabout and Analysis of Simulated Traffic Data.
Academic Advisor: Prof. R.A. Dayananda and Dr. P. Kalukottege

SCHOLARSHIPS AND AWARDS

- Full Scholarship for the Second International Conference on Industrial and Information Systems (ICIIS-2007) towards the registration fees for the conference. Value of the award: US\$ 220.
- Japanese Government (MONBUKAGAKUSHO) Scholarship for Postgraduate Research Studies in 2005.
- ADB Scholarship for M.Sc. studies in Computer Science at University of Colombo, School of Computing in 2002.

RESEARCH INTERESTS

- Medical image processing
- Use of Statistical techniques in image processing applications
- Content based image retrieval
- Data Science and Big Data Analytics
- Statistical Data Analysis

COURSES TOUGHT

- Introduction to Probability Theory
- Sampling Techniques
- Design and Analysis of Experiments
- Stochastic Process
- Categorical Data Analysis
- Introduction to Statistical Data Mining
- Advanced Techniques in Computer Graphics (Postgraduate)
- Digital Image Processing (Postgraduate)
- Communication Networks (Postgraduate)
- Statistical Methods (Postgraduate)

OTHER QUALIFICATIONS

- **Staff Development Program:** Staff Development Unit, University of Kelaniya.
Program Contents: Trends and Future Scenarios of Higher Education and Professional Education, Enhancing Teaching Competencies, Enhancing Research Competencies, Using new Information and Communication Technologies, Being More Effective in Administration/Management Roles and Enhancing Counseling Competencies.
- Participated for the two day training program for Senior Student Counselors at University of Peradeniya (2009, July)

ACADEMIC EXPERIENCE

- **Visiting Fellow (2015, May - to Date):** School of Computing, Engineering and Mathematics, Western Sydney University, Australia.
- **Senior Lecturer (2008, Oct - to Date):** Department of Statistics & Computer Science, Faculty of Science, University of Peradeniya.
- **Lecturer (2009, Jan - to Date):** Postgraduate Institute of Science, University of Peradeniya.
- **Lecturer (2002, Nov - to 2008, Oct):** Department of Statistics and Computer Science, Faculty of Science, University of Peradeniya.
- **Demonstrator (2002, Jul - 2002, Oct):** Department of IT and Decision Science, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura.
- **Demonstrator (2001, Nov - 2002, Jul):** Department of Statistics and Computer Science, Faculty of Science, University of Sri Jayewardenepura.

OTHER ACTIVITIES

- Director (2016, July - to date) - Science Industry Interaction Cell, Faculty of Science, University of Peradeniya.
- Head (2013, March - 2015, March) - Department of Statistics & Computer Science, Faculty of Science, University of Peradeniya.
- Director (2011, April - to 2013, April) - Science Industry Interaction Cell, Faculty of Science, University of Peradeniya.
- Secretary (2009, Dec - to 2012, Dec) - Board of Study in Statistics and Computer Science, Postgraduate Institute of Science, University of Peradeniya.
- Member (2009, May - to Date) - Board of Study in Statistics and Computer Science, Postgraduate Institute of Science, University of Peradeniya.
- Senior Student Counselor (2009, Jan - 2011, Dec) - University of Peradeniya.
- Senior Treasurer, Statistics Circle, University of Peradeniya (2011/2012, 2012/2013)
- Senior Treasurer, Buddhist Brotherhood Society, Faculty of Science, University of Peradeniya, (2009/2010, 2010/2011, 2011/2012).
- Editorial Board Member (2012, Dec to Date) - Institute of Applied Statistics of Sri Lanka.
- Assistant Secretary (2011, Dec - to 2012, Dec) - Institute of Applied Statistics of Sri Lanka.
- Executive Committee Member - Applied Statistics Association of Sri Lanka (2011, 2012, 2013).
- Organizing Committee Member & Editorial Board Member - Conference on Sri Lanka Japan Collaborative Research, 2012
- Local Organizing Committee Member - International Statistics Conference, Sri Lanka, 2011.
- Member - Course Unit Committee, Faculty of Science - University of Peradeniya, 2010/2011.
- Member - Ragging Prevention Committee, Faculty of Science - University of Peradeniya, 2010.
- Member - Audio and Visual Committee, Peradeniya University Research Sessions (PURSE), 2010.
- Member - Organizing Committee, Peradeniya University Research Sessions (PURSE), 2009.
- Reviewer - Peradeniya University Research Sessions (PURSE), 2009/2010/2011.

OTHER POSITIONS HELD

- **Computer Programmer (1995 - 2001):** Ellawala Exports (Pvt) Ltd, Kollupitiya.
Responsibilities: System Analysis, Design, Development, Implement and Testing of Jewelry Production and other supporting systems. Platform: UNIX. Database and Programming Language Used: Informix, VB and C/C++.

RESEARCH PUBLICATIONS

Refereed Journals:

1. Chamikara MAP, Galappaththi A, Yapa RD, Nawarathna RD, Kodituwakku SR, Gunatilake J, Jayathilake AACA, Liyanage L. (2016) Fuzzy based binary feature profiling for modus operandi analysis. PeerJ Computer Science 2:e65https://doi.org/10.7717/peerj-cs.65, 2016.
2. A Galappaththi, MAP Chamikara, Y Yapa, SR Kodituwakku, J Gunatilake, Identification of Neutral Members in Social Networks using a Distance and Fuzzy based Model, International Journal of Computer Application 119 (22), 2015.
3. R. R. Nanayakkara, Y. P. R. D. Yapa, P. B. Hevawithana, P. Wijekoon, Automatic Breast Boundary Segmentation of Mammograms, International Journal of Soft Computing and Engineering (IJSCE), ISSN: 2231-2307, Volume-5 Issue-1, pp 97-101, March 2015.
4. P Gunathilake, Y Yapa, AJ Pinidiyaarachchi, JV Wijayakulasooriya, R Ranaweera, Computerized 3D Modeling for Rapid Artificial Bone Substitute Manufacturing, International Journal of Computer Applications 119 (17), 2015.
5. R. M. I. P. Ratnayake, P. Wijekoon, Yapa. R.D., Relationship Between All Share Price Index (ASPI) and Macroeconomic Variables: Evidence from Sri Lanka, International Journal of Development Research, Vol. 4, Issue 9, pp 1923-1928, 2014.
6. I.A. K. C. Samarasinghe, S.R. Kodituwakku, R. D. Yapa, *Understanding the Internet Usage Habits of the Students of University of the Visual & Performing Arts through Data Mining*, International Journal of Soft Computing and Engineering (IJSCE), Volume-4, Issue-2, 2014, pp 45-48, ISSN: 2231-2307.
7. I.A. K. C. Samarasinghe, S.R. Kodituwakku, R. D. Yapa, *Data Mining and Service Customization in Leisure and Hospitality*, International Journal of Soft Computing and Engineering (IJSCE), Volume-3, Issue-5, 2013, pp 24-29, ISSN: 2231-2307.
8. M.A.P. Chamikara, Y.P.R.D. Yapa, S.R. Kodituwakku, J. Gunathilake, *An efficient algorithm to detect the nearest location of a map for a given theme*, International Journal of Scientific & Technology Research (IJSTR), Volume-2, Issue-4, pp 55-59, April 2013, ISSN 2277-8616.
9. C.Manoj, P.Wijekoon., R.D. Yapa., *The McDonald Generalized Beta-Binomial Distribution: A New Binomial Mixture Distribution and Simulation Based Comparison with its Nested Distributions in Handling Overdispersion*, International Journal of Statistics and Probability, 2(2), 2013, DOI: 10.5539/ijsp.v2n2p24
10. M.A.P. Chamikara, Y.P.R.D. Yapa, S.R. Kodituwakku, J. Gunathilake, *SL-SecureNet: Intelligent Policing using Data Mining Techniques*, International Journal of Soft Computing and Engineering, Volume 2 - Issue 1, pp 175-180, March 2012, ISSN: 2231-2307.
11. T.M.D.K. Bandara, R.D. Yapa, S. R. Kodituwakku, *Simulation of Regression Analysis by an Automated System Utilizing Artificial Neural Networks*, International Journal of Latest Trends Computing, Vol. 2, No. 3, pp 378-391, Sept. 2011, E-ISSN: 2045-5364.
12. Roshan Dharshana Yapa, Koichi Harada, *Breast Skin-Line Estimation and Breast Segmentation in Mammograms using Fast-Marching Method*, International Journal of Biomedical Sciences, Vol. 3, No. 1, pp 54-62, 2008, ISSN: 2070-3848.
13. Roshan Dharshana Yapa, Koichi Harada, *Connected Component Algorithms for Greyscale Images and Evaluation of Performance using Digital Mammograms*, International Journal of Computer Science and Computer Security, Vol. 8, No. 6, pp 33-41, 2008, ISSN: 1738-7906.
14. Roshan Dharshana Yapa, Koichi Harada, *A Connected Component Labelling Algorithm For Greyscale Mammography Image Processing as a Pre-Processing Tool*. Machine Graphics & Vision, Vol. 16, No. 3/4, pp 305-327, 2007, ISSN: 1230-0535.

Refereed International Conferences:

1. C. Manoj, P. Wijekoon, YPRD Yapa, *An Improved Method of Modelling Plant Species Population in Japanese Grasslands Using a Generalized Beta-Binomial Distribution*, Conference on Sri Lanka - Japan Collaborative Research, Sri Lanka, 2013. (Abstract).
2. GMNR Gajanayake, RD Yapa, B Hewawithana, *Comparison of Standard Image Segmentation Methods in the use of Segmentation of Brain Tumors from 2D MR Images*, 4th IEEE International Conference on Industrial and Information Systems, Sri Lanka, pp 301-305, December 2009, (IEEEExplore, DOI: 10.1109/ICIINFS.2009.5429848).

3. Roshan Dharshana Yapa, Koichi Harada, *Breast Skin-Line Estimation in Mammograms Using an Enhanced Fast-Marching and Mathematical Morphological Techniques*. 32nd AAPR/OAGM Workshop, pp 223-234, Linz (Austria), May, 2008, ISBN 978-3-85403-232-8.
4. Roshan Dharshana Yapa, Koichi Harada, *Application of Fast-Marching Method on Mammograms for Breast Skin-Line Estimation*, 2nd IEEE International Conference on Industrial and Information Systems, Sri Lanka, pp 59-62, August, 2007. (IEEE Xplore, DOI: 10.1109/ICIINFS.2007.4579148)
5. Roshan Dharshana Yapa, Koichi Harada, *A Connected Component Labelling Algorithm for Greyscale Images and Application of the Algorithm on Mammograms*, 22nd Annual ACM Symposium on Applied Computing, pp 146-152, Seoul (Korea), March, 2007, ISBN:1-59593-480-4.
6. Roshan Dharshana Yapa, Ajantha. S. Atukorale, *Automation of Multiple Linear Regression Analysis Using Neural Networks*, 7th International Information Technology Conference (IITC), Colombo, Sri Lanka, December 2004, ISBN 955-8974-01-3.

Refereed Local Conferences (Abstracts & Extended Abstracts):

1. K Samarasinghe, SR Kodituwakku, YPRD Yapa, *A Preliminary Study on Impact of Data Mining on Telecommunication Company Revenue*, Postgraduate Institute of Science Research Congress 2014, pp 41, 2014.
2. RR Nanayakkara, YPRD Yapa, P Wijekoon, PB Hewavithana, *Automatic Breast Skin Line Segmentation of Mammograms*, Postgraduate Institute of Science Research Congress 2014, pp 46, 2014.
3. MKMLK Mahanayake, YPRD Yapa, *Assessing the Key Factors Affecting the Apparel Exports in Sri Lanka and Identifying the Significance of Generalized System of References Plus (GSP+)*, Postgraduate Institute of Science Research Congress 2014, pp 52, 2014.
4. MAP Chamikara, A Galappaththi, K Sajanathan, S Rasnayake, C Manoj, AACA Jayathilake, YPRD Yapa, SR Kodituwakku, J Gunathilake, *Statistical and Sociological Analysis on Crime Data*, Postgraduate Institute of Science Research Congress 2014, pp 54, 2014.
5. PMPC Gunathilake, YPRD Yapa, AJ Pinidiyaarachchi, JV Wijayakulasooriya, R Ranaweera, *Computerized 3D Modeling for Rapid Artificial Bone Substitute Manufacturing*, Postgraduate Institute of Science Research Congress 2014, pp 78, 2014.
6. C. Manoj, P. Wijekoon, YPRD Yapa, *An Improved Method of Modelling Plant Species Population in Japanese Grasslands Using a Generalized Beta-Binomial Distribution*, Conference on Sri Lanka - Japan Collaborative Research, Sri Lanka, 2013.
7. PMPC Gunathilake, YPRD Yapa, UAJ Pinidiyaarachchi, JV Wijayakulasooriya, R Ranaweera, K Oka, *Advancing Composite-type Optical Fiberscope Vision*, Conference on Sri Lanka - Japan Collaborative Research, Sri Lanka, 2013.
8. MAP Chamikara, YPRD Yapa, SR Kodituwakku, J Gunathilake, Y Iwao, *GIS Based Hotspot Detection in Crime Analysis*, Conference on Sri Lanka - Japan Collaborative Research, Sri Lanka, 2013.
9. AMKWK Abekoon, RD Yapa, SDSS Sooriyapathirana, *An Automated System for Gel Image Analysis using Image Processing Technologies and Signal Processing Technologies*, proceedings of the PURSE 2012, University of Peradeniya, Vol 17, pp 248, 2012.
10. PGSS Jayarathna, RD Yapa, SDSS Sooriyapathirana, *A Computer Based Statistical Tool to Analyze The Correlation Among DNA Sequences*, proceedings of the PURSE 2012, University of Peradeniya, Vol 17, pp 208, 2012.
11. ICGG Idamawatta, RD Yapa, SDSS Sooriyapathirana, *A Statistical Tool to Characterize Sub-Population Data of Biological Species*, proceedings of the PURSE 2012, University of Peradeniya, Vol 17, pp 207, 2012.
12. C Manoj, P Wijekoon, RD Yapa, *Quadratic Approximation Based Confidence Interval for the Beta-Binomial Inverse-Dispersion Parameter for Highly Over Dispersed Binomial Data*, proceedings of the PURSE 2012, University of Peradeniya, Vol 17, pp 158, 2012.
13. RMIP Ratnayake, P Wijekoon, RD Yapa, *The relationship Between, All Share Price Index and Macroeconomic Variables: Evidence from Sri Lanka*, proceedings of the PURSE 2012, University of Peradeniya, Vol 17, pp 25, 2012.
14. RMPGKDB Rathnayake, RD Yapa, *Impact of Stock Splits on Stock Return and Liquidity: A Case Study of Colombo Stock Exchange*, proceedings of the PURSE 2011, University of Peradeniya, Vol 16, pp 126, 2011.
15. SMS Piyarathana, RD Yapa, *Fingerprint Image Segmentation using Fuzzy Logic*, proceedings of the PURSE 2011, University of Peradeniya, Vol 16, pp 128, 2011.
16. LAPN Liyanaarachchi, YPRD Yapa, SDSS Sooriyapathirana, *A User-friendly Java Based Statistical Tool to Analyse the Segregation Data of Crosses in Genetics and Breeding*, proceedings of the PURSE 2011, University of Peradeniya, Vol 16, pp 192, 2011.
17. MAP Chamikara, RD Yapa, J Gunathilake, *Intelligent Crime Mapping System*, in the proceedings of the PURSE 2010, University of Peradeniya, Vol 15(II), pp 756-758, 2010.

18. C Manoj, P Wijekoon, RD Yapa, *Adjustment on William's when Negative Variance Components Occure in Under-Dispersed Logistic Models*, in the proceedings of the PURSE 2010, University of Peradeniya, Vol 15(2), pp 759-761, 2010.
19. KANK Karunarathna, RD Yapa, P Dias, *Identifying the Factors Affecting the Shrinkage of Rubber Strips Used for Retreated Tyres*, in the proceedings of the PURSE 2010, University of Peradeniya, Vol 15(2), pp 877-779, 2010.
20. TMDK Bandara, RD Yapa, *Artificial Neural Network Approach for Regression Analysis*, Proceedings of Peradeniya University Research Sessions, Sri Lanka, Vol. 14, pp 549-551 December 2009, ISBN: 978-955-589-131-8.
21. GMNR Gajanayake, RD Yapa, B Hewawithana, *Magnetic Resonance Image Segmentation Using Standard Image Segmentation Methods to Isolate a Brain Tumor*, Proceedings of Peradeniya University Research Sessions, Sri Lanka, Vol. 14, pp 552-554, December 2009, ISBN: 978-955-589-131-8.
22. C Manoj, P. Wijekoon, RD Yapa, *Patterns of Density Plots of Random Effects in Mixed Effects Logistic Regression Models*, Proceedings of Peradeniya University Research Sessions, Sri Lanka, Vol. 14, pp 555-557, December 2009, ISBN: 978-955-589-131-8.

Poster Presentations:

1. Usoof, H., Lindgren, E., Yapa, R. D., & Karunarathna, N. K., *Studying writing profiles with keystroke dynamics using fuzzy logic and statistics*. EARLI 2009, Amsterdam, Netherlands.

Workshops:

1. H. Nagahashi, C. Atupelage, A. Dharmarathne, K. D. Sandaruvan, A. Madugalla, R. Ranaweera, M. Jayathilake, U.A.J. Pinidiyaarachchi, R. D. Yapa, P. Gunathilake, *Workshop on Medical Informatics*, International Conference on Advances in ICT for EmergingRegions (ICTer), Sri Lanka, December 2013.
2. C.Manoj, P.Wijekoon., R.D. Yapa., *Recent Advances of Binomial Mixture Models in Ecological Applications*, "Statistics in Action"-International Workshop, International Statistical Institute's Outreach Committee for South Asia. March 7-10, 2013, Nashik, India.
3. J Wijayakulasooriya, RD Yapa, UAJ Pinidiyaarchchi, V Weerasinghe, U Abeyratne, *Workshop on Biosignal Processing and Medical Imaging*, 4th IEEE International Conference on Industrial and Information Systems, Sri Lanka, December 2009.

I state the particulars given above are true and accurate according to the best of my knowledge.

Roshan Dharshana Yapa

Date: 10/11/2016